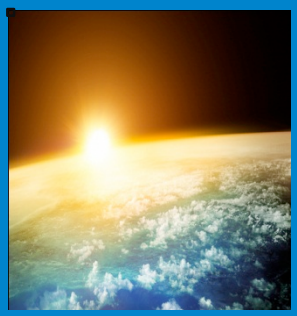
JPL Center For Climate Sciences



JPL CENTER FOR CLIMATE SCIENCES AND THE GLOBAL CLIMATE & ENERGY GROUP PRESENT:
A WATER CYCLE & RESOURCES COLLOQUIUM & WORKSHOP SERIES

THE SCIENCE AND APPLICATIONS OF PRECIPITATION AND ATMOSPHERIC RIVERS IN THE WESTERN U.S.

SPEAKER: DR. F. MARTIN RALPH
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

FEBRUARY 16, 2012
2.00-3.00 PM, 180-101
ALSO BROADCAST LIVE ON JPL TV, CHANNEL 32

I will provide an overview of recent studies that have explored Western U.S. precipitation processes. These projects have addressed the underlying physical mechanisms that generate precipitation, assessed how well current forecasting performs in extreme events, developed improved monitoring capabilities and explored the impacts of changing climate. In addition, I will offer highlights of recent analyses related to atmospheric rivers from NOAA's Hydrometeorology Testbed, the CalWater experiment and the Winter Storms and Pacific Atmospheric Rivers demonstration project that used the NASA Global Hawk aircraft in early 2011. This research has identified critical gaps in our understanding of water vapor budgets in atmospheric rivers and of the potential role of Asian aerosols in western U.S. precipitation. Finally, I will present a vision for a future observing system that could improve predictions and climate change monitoring of Western U.S extreme precipitation and floods.

Dr. F. Martin Ralph is Chief of the Water Cycle Branch at the National Oceanic and Atmospheric Administration's Earth System Research Laboratory/Physical Sciences Division, and a Research Associate at the Scripps Institution of Oceanography. He is a research meteorologist whose interests include improving our understanding and prediction capabilities of key elements of the global water cycle such as water vapor transport, precipitation and runoff. Scientific understanding of atmospheric rivers, which are critical to both the global water cycle and to the distribution of precipitation and flooding in key parts of the world, is also a major thrust. Dr. Ralph holds a Ph.D. and M.S. in Atmospheric Sciences from the University of California, Los Angeles, and a B.S. in Meteorology from the University of Arizona, Tucson.

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